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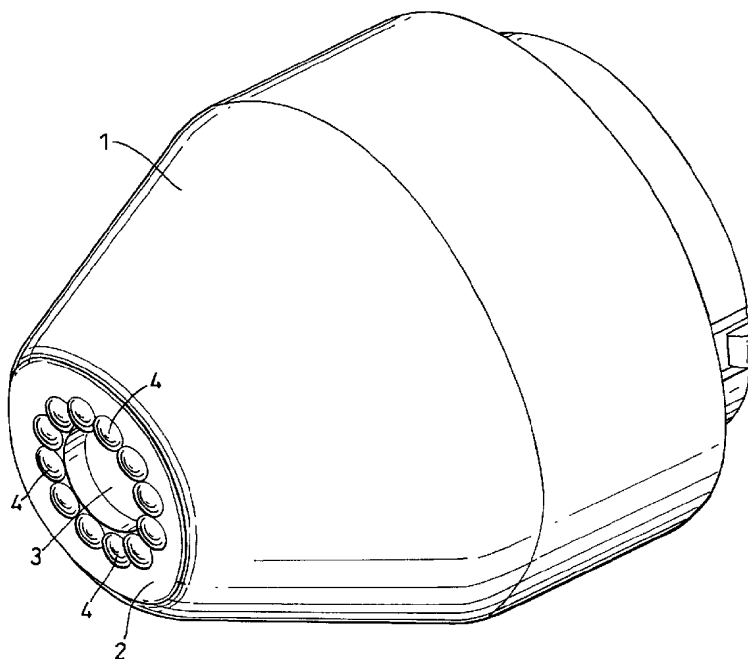
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(54) Title: IMPROVEMENTS RELATING TO SKIN PRICKERS



(57) Abstract: A skin pricker has a lancet which, when released, springs forward to project its tip momentarily through an aperture (3) in a platform (2) which is pressed against the user's skin. Surrounding the aperture there is an array of studs (4) proud of the platform (2) which indent into the skin around the puncture point to confuse the nerves in that area and make the prick less noticeable.



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Improvements relating to Skin Prickers

This invention relates to skin prickers.

There are many different kinds of skin prickers,  
mostly being spring loaded devices which fire disposable  
5 lancets. Some pricking devices are entirely disposable  
after a single use. But whatever form they take, there is  
no avoidance of the fact that they puncture the skin of  
the user and inflict pain. This may be trivial and  
transitory, but many users would welcome its reduction,  
10 while accepting its elimination is not really possible.

It is the aim of this invention, if not to reduce the  
pain, at least to divert attention from it.

According to the present invention there is provided  
a skin pricker comprising a housing with means for  
15 projecting a lancet therein forwards, momentarily to  
expose the tip of the lancet through an aperture in the  
nose of the housing, wherein the aperture is in a platform  
generally perpendicular to the direction of motion of the  
lancet, characterised in that projections are provided on  
20 the platform to press into the user's skin adjacent the  
point to be punctured by the lancet.

The platform will usually be circular, with the  
aperture at the centre, and the projections will  
conveniently be in an annular array around the aperture.  
25 Coned studs appear to be effective, but other shapes such  
as serrations or elongate teeth arranged like the spokes  
of a wheel could work. In any event, their shape, size

and spacing should be such that, when pressed against the skin, they should be felt by the user to the point of slight discomfort, but not be painful. The effect should be to confuse the nerves in the region of the impending prick so that, when that prick is made, it is less  
5 noticeable than it would otherwise be.

A proposed arrangement is shown, by way of example, in the accompanying drawing, which is a perspective view of the nose cone of a lancet firing device, or skin  
10 pricker.

The nose cone 1 terminates at its forward end in an annular platform 2 at right angles to the axis of the cone. The tip of the lancet (not shown) is projected through the central aperture 3. An annular array of studs  
15 4 surrounds the aperture, standing slightly proud of the platform 2. Each stud 4 is of shallow conical form with the sharpness of its tip dulled by a very slight rounding.

Thus, in use, there will be twelve (in the example shown) points pressing into the skin around the prick  
20 point.

It will be understood that the number and arrangement of the studs may vary, and that their size and shape may differ. For example, the array could zigzag as it encircles the aperture, with generally pyramidal studs.  
25 Alternatively, there might be two arrays, one outside the other, with different numbers and spacing of the studs in the two arrays, and perhaps differently sized and shaped

studs in the outer array compared with those in the inner array. There is also the option referred to above of serrations or teeth.

Given that a typical aperture 3 might be 3-4mm in diameter, the drawing indicates the size of studs that have been found to be effective. But that is not intended to be limiting, and it is quite possible that a range of stud sizes may be provided, the user being able to choose, by trial and error, which size and/or pattern is most beneficial.

Claims

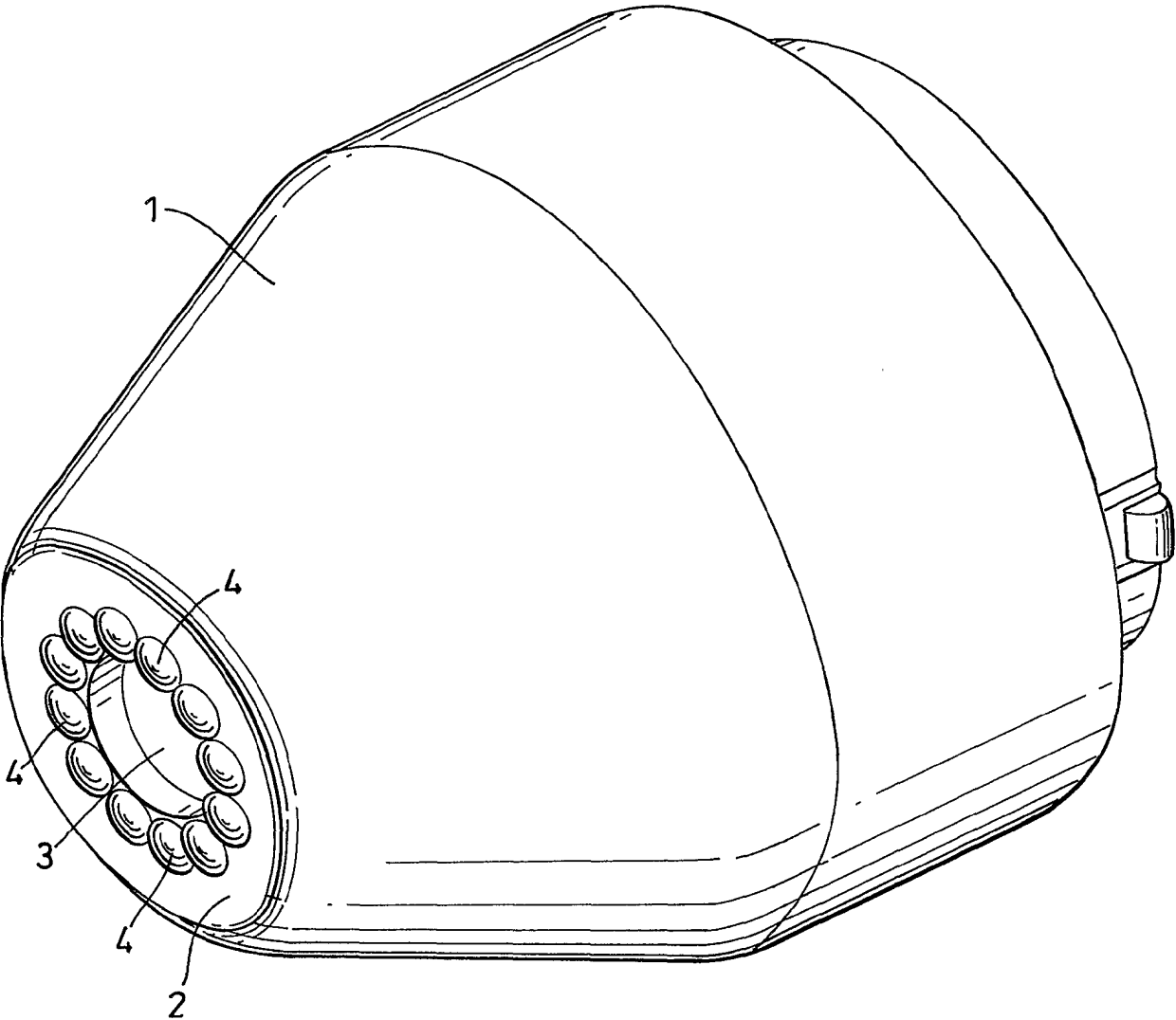
1. A skin pricker comprising a housing with means for projecting a lancet therein forwards, momentarily to  
5 expose the tip of the lancet through an aperture (3) in the nose (1) of the housing, wherein the aperture (3) is in a platform (2) generally perpendicular to the direction of motion of the lancet characterised in that projections (4) are provided on the platform (2) to press into the  
10 user's skin adjacent the point to be punctured by the lancet.
2. A skin pricker as claimed in Claim 1, wherein the platform (2) is circular, with the aperture (3) at the centre, characterised in that the projections (4) are in  
15 an annular array around the aperture.
3. A skin pincher as claimed in Claim 1 or 2, characterised in that the projections are tapered studs (4).

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 01/00780

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61B5/15

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 85 04089 A (PALMER ET AL.) 26 September 1985 (1985-09-26) page 2, line 31 -page 3, line 7 page 5, line 11 - line 21; figures 1-8	1-3
A	WO 97 08986 A (BIOSAFE DIAGNOSTICS CORP.) 13 March 1997 (1997-03-13) page 9, line 20 -page 10, line 8; figures 1-7	1-3
A	EP 0 555 554 A (KABUSHIKI KAISYA ADVANCE) 18 August 1993 (1993-08-18) column 4, line 33 - line 46; figures 1-9	1,2
A	US 5 026 388 A (INGALZ) 25 June 1991 (1991-06-25) the whole document	1



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

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